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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,112	08/24/2004	J. Andrew Galloway	PU2000	5111
23454 7590 12/20/2006 CALLAWAY GOLF COMPANY 2180 RUTHERFORD ROAD CARLSBAD, CA 92008-7328			EXAMINER PASSANITI, SEBASTIANO	
			ART UNIT	PAPER NUMBER
			3711	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/20/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/711,112

Applicant(s)

GALLOWAY, J. ANDREW

Examiner

Sebastiano Passaniti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on see detailed Office action.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is responsive to communication received 09/29/2006 –
Amendment.

Claim 2 has been canceled, as directed.

Claim 18 stands withdrawn from further consideration as being drawn to a non-elected invention.

Claims 1 and 3-17 remain pending.

Following is a non-final action on the MERITS:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun ('685). As to claim 1, note major body (11) comprising a sole, striking plate and a weight (21) that may serve as the claimed "ribbon". Further, note minor section (12) comprising a crown and hosel section of non-metallic construction. As to claim 4, the hosel is clearly seen as extending upwardly from the crown surface.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun ('685) in view of Murphy ('847). Sun differs from the claimed invention in that Sun does not specify that the minor body comprise the specific non-metallic material claimed, nor does Sun specify a hosel section extending downward from the interior surface of the crown. Note, Sun does state that the minor body may include suitable plastic (column 2, line 28). Moreover, Sun does detail that this plastic may be used in combination with metallic materials such as aluminum or titanium (column 2, line 30). Murphy shows it to be old in the art to fabricate the upper crown portion of a hollow wood-type club head from composite material such as plies of carbon pre-peg sheets while making the lower sole section from a material such as titanium or stainless steel and having a higher specific gravity than the material of the crown, the reason being to help lower the center of gravity and desirably affect the weight distribution of the head. See col. 1, lines 53-65 in Murphy. In view of the patent to Murphy, it would have been obvious to modify the device in the cited art reference to Sun by taking advantage of lighter composite materials for the crown section and heavier metallic materials for the sole portion, the motivation being to create a more desirable weight distribution. Specific to claim 3, Murphy obviates the use of a hosel portion placed interior with respect to the crown portion.

Claims 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun ('685). As to claim 5, although Sun does not detail the exact claimed dimension for the thickness of the crown, it would appear that the skilled artisan would

have found it obvious to size the crown based upon the characteristics of the material being used, with the thickness being commensurate with the amount of structural integrity required for the crown, considerations with respect to the desired amount of overall club head weight taken up by the crown and the method for manufacturing the crown. As to claim 8, although Sun does not detail the exact mass dimensions for the minor and major bodies defined above, Sun does provide some particular mass dimensions for the various parts of the head, noting that the major body (i.e., male unit) has a weight that is 1.85 to 2.35 times greater than the weight of the minor body (i.e., the female unit). These disclosed proportions appear to reflect the criteria set forth by the claimed invention, wherein the minor body may be less than one-half the weight of the major body. Moreover, it would appear that the claimed mass limitations are not critical. Rather, the claimed dimensions are selected based upon the overall weight distribution desired and further based upon the particular materials selected for the various club head parts. The skilled artisan would have found it obvious to tailor the weight of the head, given the suggestions in Sun that the weight of the head is variable. As to claim 9, while Sun does not detail a volume measurement, the skilled artisan would have found it obvious to provide a volume between 300 cc and 500 cc, as claimed, since this volume range is well within the range of volume most commonly recognized by "wood-type" club head. Note, the Sun device does indeed take up "volume", even though the club head is not necessarily hollow. It is noted that the claim language does not preclude a club head body that is not substantially hollow.

Claims 10-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun ('685) in view of Zeider ('224) and Elmer ('660). As to claims 10-12, although Sun lacks a suggestion of plural minor bodies, it is clear that if a clubmaker had desired to fabricate a set of clubs, then the teachings of Zeider and Elmer would have obviated the inclusion of plural bodies in which the lie and loft of the club head may be changed. Here, Zeider teaches that the hosel orientation may be changed to alter the lie and loft of the head; thereby suggesting the use of a plurality of club heads, each having a diverse lie and loft angle. Elmer further obviates the notion of plural club head bodies by suggesting that club heads may comprise first and second body elements that are removably attached to one another to help customize a club head according to a golfer's preference. See col. 5, lines 38-65 in Elmer. As to claim 15, although Sun does not detail the exact mass dimensions for the minor and major bodies defined above, Sun does provide some particular mass dimensions for the various parts of the head, noting that the major body (i.e., male unit) has a weight that is 1.85 to 2.35 times greater than the weight of the minor body (i.e., the female unit). These disclosed proportions appear to reflect the criteria set forth by the claimed invention, wherein the minor body may be less than one-half the weight of the major body. Moreover, it would appear that the claimed mass limitations are not critical. Rather, the claimed dimensions are selected based upon the overall weight distribution desired and further based upon the particular materials selected for the various club head parts. The skilled artisan would have found it obvious to tailor the weight of the head, given the suggestions in Sun that the weight of the head is variable.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun ('685) in view of Zeider ('224), Elmer ('660) and Murphy ('847). Sun in view of Zeider and Elmer has been discussed above. Sun, as modified, differs from the claimed invention in that Sun does not specify that the minor body comprise the specific non-metallic material claimed. Noted, Sun does state that the minor body may include suitable plastic (column 2, line 28). Moreover, Sun does detail that this plastic may be used in combination with metallic materials such as aluminum or titanium (column 2, line 30). Murphy shows it to be old in the art to fabricate the upper crown portion of a hollow wood-type club head from composite material such as plies of carbon pre-peg sheets while making the lower sole section from a material such as titanium or stainless steel and having a higher specific gravity than the material of the crown, the reason being to help lower the center of gravity and desirably affect the weight distribution of the head. See col. 1, lines 53-65 in Murphy. In view of the patent to Murphy, it would have been obvious to modify the device in the cited art reference to Sun by taking advantage of lighter composite materials for the crown section and heavier metallic materials for the sole portion, the motivation being to create a more desirable weight distribution.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun ('685) in view of Murphy ('847) and Hocknell ('604). Although Sun does not detail the exact mass dimensions for the minor and major bodies defined above, Sun does provide some particular mass dimensions for the various parts of the head, noting that the major body (i.e., male unit) has a weight that is 1.85 to 2.35 times greater than

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the weight of the minor body (i.e., the female unit). These disclosed proportions appear to reflect the criteria set forth by the claimed invention, wherein the minor body may be less than one-half the weight of the major body. Moreover, it would appear that the claimed mass limitations are not critical. Rather, the claimed dimensions are selected based upon the overall weight distribution desired and further based upon the particular materials selected for the various club head parts. The skilled artisan would have found it obvious to tailor the weight of the head, given the suggestions in Sun that the weight of the head is variable. While Sun does not detail a volume measurement, the skilled artisan would have found it obvious to provide a volume between 300 cc and 500 cc, as claimed, since this volume range is well within the range of volume most commonly recognized by "wood-type" club head. Note, the Sun device does indeed take up "volume", even though the club head is not necessarily hollow. It is noted that the claim language does not preclude a club head body that is not substantially hollow.

Although Sun fails to disclose the claimed coefficient of restitution (COR) and moment of inertia (MOI) values, the incorporation of these items within Sun would have been obvious to one of ordinary skill in the art to enhance the striking characteristics of the club head in view of the patent to Hocknell, which shows it to be old in the art to include a COR within the claimed range and a MOI within the claimed range, the reason being to offer a club head with greater forgiveness and reduced twisting during off-center shots.

Claims 1, 6, 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Cackett ('592). As to claim 1, note that forward section (60) may serve as the claimed

"major body", wherein section (60) comprises a portion of the sole and striking plate and further includes a return, serving as the claimed "ribbon". The aft body (61) may serve as the claimed "minor body". Here, the minor body includes a portion of the crown and at least a portion of the "hosel section". In other words, that portion of the forward section (60), which includes the aperture (59), may be considered to be a portion of the hosel section. As to claims 6 and 7, Cackett provides that the forward and aft bodies may be either metallic or non-metallic in construction. See column 8, lines 6-22 and column 9, lines 8-27. As to claim 9, see the volume measurements listed in TABLE ONE.

Response to Arguments

In the arguments received 09/29/2006, the applicant acknowledges that the prior art reference to Erickson ('129) would normally qualify as prior art under 35 USC §102(e), but further indicates that Erickson ('129) and the present invention are commonly assigned.

Applicant's arguments with respect to the prior art reference to Erickson ('129) have been considered and are deemed to be persuasive. The prior art rejections based upon Erickson have been overcome.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 571-272-4413. The examiner can normally be reached on Monday through Friday (6:30AM - 3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eugene L. Kim can be reached on 571-272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S.Passaniti/sp
December 9, 2006


Sebastiano Passaniti
Primary Examiner